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**DRAFT ECONOMIC ANALYSIS
OF PROPOSED DESIGNATIONS OF CRITICAL
HABITAT FOR PLANT SPECIES FROM THE
NORTHWESTERN HAWAIIAN ISLANDS**

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PREFACE

The U.S. Fish and Wildlife Service has added this preface to all economic analyses of critical habitat designations:

"The standard best practice in economic analysis is applying an approach that measures costs, benefits, and other impacts arising from a regulatory action against a baseline scenario of the world without the regulation. Guidelines on economic analysis, developed in accordance with the recommendations set forth in Executive Order 12866 ('Regulatory Planning and Review'), for both the Office of Management and Budget and the Department of the Interior, note the appropriateness of the approach:

'The baseline is the state of the world that would exist without the proposed action. All costs and benefits that are included in the analysis should be incremental with respect to this baseline.'

"When viewed in this way the economic impacts of critical habitat designation involve evaluating the 'without critical habitat' baseline versus the 'with critical habitat' scenario. Impacts of a designation equal the difference, or the increment, between these two scenarios. Measured differences between the baseline and the scenario in which critical habitat is designated may include (but are not limited to) changes in land use, environmental quality, property values, or time and effort expended on consultations and other activities by federal landowners, federal action agencies, and in some instances, State and local governments and/or private third parties. Incremental changes may be either positive (benefits) or negative (costs).

"In *New Mexico Cattle Growers Ass'n v. U.S.F.W.S.*, 248 F.3d 1277 (10th Cir. 2001), however, the 10th Circuit recently held that the baseline approach to economic analysis of critical habitat designations that was used by the Service for the southwestern willow flycatcher designation was 'not in accord with the language or intent of the ESA.' In particular, the court was concerned that the Service had failed to analyze any economic impact that would result from the designation, because it took the position in the economic analysis that there was no economic impact from critical habitat that was incremental to, rather than merely co-extensive with, the economic impact of listing the species. The Service had therefore assigned all of the possible impacts of designation to the listing of the species, without acknowledging any uncertainty in this conclusion or considering such potential impacts as transaction costs, reinitiations, or indirect costs. The court rejected the baseline approach incorporated in that designation, concluding that, by obviating the need to perform any analysis of economic impacts, such an approach rendered the economic analysis requirement meaningless: 'The statutory language is plain in requiring some kind of consideration of economic impact in the CHD phase.'

"In this analysis, the Service addresses the 10th Circuit's concern that we give meaning to the ESA's requirement of considering the economic impacts of designation by acknowledging the uncertainty of assigning certain post-designation economic impacts (particularly section 7 consultations) as having resulted from either the listing or the designation. The Service believes that for many species the designation of critical habitat has a relatively small economic impact, particularly in areas where consultations have been ongoing with respect to the species. This is because the majority of the consultations and associated project modifications, if any, already consider habitat impacts and as a result, the process is not likely to change due to the designation of critical habitat. Nevertheless, we recognize that the nationwide history of consultations on critical habitat is not broad, and, in any particular case, there may be considerable uncertainty whether an impact is due to the critical habitat designation or the listing alone. We also understand that the public wants to know more about the kinds of costs consultations impose and frequently believe that designation could require additional project modifications.

"Therefore, this analysis incorporates two baselines. One addresses the impacts of critical habitat designation that may be 'attributable co-extensively' to the listing of the species. Because of the potential uncertainty about the benefits and economic costs resulting from critical habitat designations, we believe it is reasonable to estimate the upper bounds of the cost of project modifications based on the benefits and economic costs of project modifications that would be required due to consultation under the jeopardy standard. It is important to note that the inclusion of impacts attributable co-extensively to the listing does not convert the economic analysis into a tool to be considered in the context of a listing decision. As the court reaffirmed in the southwestern willow flycatcher decision, 'the ESA clearly bars economic considerations from having a seat at the table when the listing determination is being made.'

"The other baseline, the lower boundary baseline, will be a more traditional rulemaking baseline. It will attempt to provide the Service's best analysis of which of the effects of future consultations actually result from the regulatory action under review - i.e. the critical habitat designation. These costs will in most cases be the costs of additional consultations, reinitiated consultations, and additional project modifications that would not have been required under the jeopardy standard alone as well as costs resulting from uncertainty and perceptual impacts on markets.

DATED: March 20, 2002

1. INTRODUCTION

The purpose of this report is to identify and analyze the potential economic impacts that would result from the proposed critical habitat designation for the threatened and endangered plant species from the Northwestern Hawaiian Islands (NWHI). Section 4(b)(2) of the Endangered Species Act (the Act) requires the Service to designate critical habitat on the basis of the best scientific and commercial data available after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. The Service may exclude areas from critical habitat designation when the benefits of exclusion outweigh the benefits of including the areas within critical habitat, provided the exclusion will not result in extinction of the species.

The focus of this economic analysis is on section 7(a)(2) of the Act, which requires Federal agencies to insure that any action authorized, funded, or carried out by the Federal government is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. Federal agencies are required to consult with the Service whenever they propose a discretionary action that may affect a listed species or its designated critical habitat. Aside from the protections provided under section 7, the Act does not provide other forms of regulatory protection to lands designated as critical habitat. Because consultation under section 7 only applies to activities that involve Federal permits, funding or involvement, the designation of critical habitat will not afford any additional regulatory protections under the Act with respect to strictly private activities. This analysis does not address impacts associated with implementation of other sections of the Act not associated with critical habitat.

2. THE LISTED PLANTS AND PROPOSED CRITICAL HABITAT

Under the Endangered Species Act of 1973, as amended (the Act), the United States Department of the Interior, Fish and Wildlife Service (the Service) proposes to designate critical habitat for threatened and endangered plant species from three islands (Nihoa, Necker, and Laysan) within the NWHI. This section provides information on the listed plants and proposed critical habitat units, most of which comes from the document "Endangered and Threatened Wildlife and Plants; Proposed Determinations of Prudency and Proposed Designations of Critical Habitat for Plant Species From the Northwestern Hawaiian Islands, HI" (the proposed rule), drafted by the Service and published in the *Federal Register* on May 14, 2002 (67 FR 34522).

2.a. The Listed Plants

Between 1994 and 1996, the Service listed a total of six species historically found on the NWHI. The Service is proposing to designate critical habitat for five of the six species, specifically *Amaranthus brownii*, *Mariscus pennatiformis*, *Pritchardia remota*, *Schiedea verticillata*, and *Sesbania tomentosa*. The proposed rule contains a detailed discussion of the plant taxa, including

taxonomy, ecology, habitat requirements, historical and current distribution, and threats for each of these species.

2.b. Proposed Critical Habitat Units

The Service proposes all of Nihoa, Necker, and Laysan Islands for designation as critical habitat for the plants, an area of 1,232 acres (Figure 1). These islands are part of the chain of islands and atolls that extends along a linear path for approximately 1,150 miles northwest from the main Hawaiian islands. A brief description of each island's geography, human visitation, and man-made features follows:

- **Nihoa Island** is an uninhabited, rocky, 171-acre island that rises approximately 900 feet above sea level. Its steep topography and crater shape reveal its volcanic origin. Access to the island by boat is limited due to difficult and dangerous landing conditions; thus, the island is rarely visited. However, there is archeological evidence of past habitation.
- **Necker Island** is uninhabited and consists of thin-layered weathered lava flows. It is less than 300 feet in elevation and 46 acres in area. The terrain is steep and rugged and access is difficult and dangerous; thus, the island is rarely visited. The only man-made feature on the island is the remnants of a *heiau* (indigenous place of worship).
- **Laysan Island** is a low sandy island, 1,015 acres in size, and is fringed by a reef. A 200-acre hypersaline lagoon is located in the center of the island. Laysan Island supports a small year round field station maintained by the Service. The field station includes five to six tents made of rubberized fabric supported on wooden platforms. The station is staffed by two to three Service staff year round. The National Marine Fisheries Service (NMFS) also sends two to three staff to Laysan for approximately six months every year.

2.b.(1) Primary Constituent Elements

Each of the proposed critical habitat units provides one or more of the primary constituent elements essential for the conservation of the plant species. The Service defines primary constituent elements on the basis of the habitat features of the areas where the plant species are reported. Habitat features include the type of plant community, associated native plant species, locale (e.g., steep rocky cliffs, talus slopes, stream banks), and elevation.

The Service considers all three of the critical habitat units to be occupied by the listed plant species.

2.b.(2) Land Ownership and Management

Nihoa, Necker, and Laysan Islands are entirely owned by the Federal government and are managed as part of the Hawaiian Islands National Wildlife Refuge (HINWR). Management of the HINWR is guided by the 1986 HINWR Master Plan/Environmental Impact Statement, which places primary emphasis on protecting and enhancing Refuge wildlife resources, particularly threatened and endangered species. Pursuant to the Plan, there is no general public or recreational use allowed at the HINWR. Access is strictly regulated through a permit system because of the sensitivity of the native wildlife on these islands to human disturbance and the high risk of importation of alien plant and invertebrate species. In addition, strict quarantine procedures are in effect for those accessing the Refuge. Other than the Refuge staff, only individuals conducting scientific research or undertaking natural history film recording have been granted official permission to visit the HINWR.

Management on Laysan Island is also guided by the draft “Laysan Island Ecosystem Restoration Plan” (1998), a long-term planning document that was developed as an integrated approach to managing Laysan Island. The plan is not currently finalized or fully funded. However, HINWR staff use the plan to guide conservation management actions and are currently seeking funding for portions of the plan (personal communication with HINWR, 2002). The plan outlines conservation management actions for the endangered plant species on Laysan. These conservation management actions include:

- The prevention of new plant or animal introductions to the island;
- Restoration of the Laysan Island ecosystem that was present prior to major human-caused habitat modification;
- Control/eradication of non-native species;
- Reintroduction of native species that are currently extinct on the island; and
- Establishment of periodic comprehensive ecosystem monitoring.

Finally, critical habitat for the Hawaiian monk seal on Nihoa, Necker, and Laysan Islands represents yet a third layer of conservation management. Hawaiian monk seal critical habitat includes all waters, beaches, sand spits, and islets from the beach crest vegetation out to a depth of 20 fathoms. As with the plant critical habitat, section 7(a)(2) of the Act requires Federal agencies to consult with the Service to ensure that activities they fund, authorize, permit, or carry out do not result in destruction or adverse modification of monk seal critical habitat.

3. SOCIOECONOMIC PROFILE

As noted above, these islands are uninhabited. The primary human activities on Nihoa, Necker, and Laysan Islands are those related to the operation and upkeep of the HINWR.

The annual budget allocated to maintaining this Refuge is an indicator of the amount of economic activity associated with these islands. The entire Pacific Remote Islands National Wildlife Refuge Complex annual budget, which includes the HINWR and five other remote island refuges, averages \$1.4 million per year. Refuge staff estimate that approximately half of that budget is used to manage the HINWR (personal communication with HINWR, 2001). The HINWR includes eight separate island and reef areas, so only a portion of this budget is spent on Nihoa, Necker, and Laysan Islands.

4. ECONOMIC COSTS AND BENEFITS

The approach used in this economic analysis involves estimating both (1) the total section 7-related economic costs and benefits (also referred to as economic impacts) of the plant listings and critical habitat designation, and (2) the subset of these costs and benefits that is solely attributable to critical habitat designation. As a result, for each potential impact, the analysis presents two estimates:

- **Total Section 7 Costs and Benefits.** These estimates include the economic impacts likely to occur from implementing both the species listing provision and the critical habitat provision of section 7 of the Act.
- **Costs and Benefits Attributable to Critical Habitat.** These estimates represent those portions of the section 7-related economic impacts that are most likely attributable to the proposed plants critical habitat designation but not to the plant listings.

The primary section 7 cost associated with the designation of critical habitat for the plants is the cost of conducting a section 7 consultation. Participants in a consultation may include the Service, the Federal Action agency, and possibly a non-Action agency applicant. Although the Service does not charge fees for its consultations, participants in consultations normally spend time assembling information about the site and their proposed project or activity; preparing for one or more meetings; participating in meetings; arranging for biological surveys and any associated reports; and responding to correspondence and phone calls.

Section 7 consultations for the plants on Nihoa, Necker, and Laysan Islands are expected to be relatively minor, involve few people, and take a short amount of time because of the islands' isolation and the existing protections provided by the HINWR. The cost per consultation is estimated to be \$2,200 for a Federal Action agency or Federal applicant and \$1,600 for the Service. If there is a non-Action agency applicant, the cost to the applicant is estimated to be \$1,400. Thus, total

consultation costs are estimated to be \$3,800 if Federal agencies only are involved, and \$5,200 if there is a non-Action agency applicant. The estimate is based on: (1) a review of consultation records across the country related to other critical habitat rulemakings; (2) the typical amount of time spent by all participants; and (3) the relevant standard hourly rates and overhead allowances for the Service, other Federal agencies, and private applicants in Hawai'i (U.S. Office of Personnel and Management, 2002).

4.a. Section 7-Related Costs

The following analysis of section 7-related costs addresses ongoing and potential future land-use activities in the proposed critical habitat.

4.a.(1) Management of the Hawaiian Islands National Wildlife Refuge (HINWR)

As noted above, Nihoa, Necker, and Laysan Islands are all included in the HINWR. On Nihoa and Necker Islands, conservation activities are currently limited to an annual or biannual visit by Refuge staff due to funding constraints and difficult access to the islands. The islands are closed to the public except through a special-use permit. Additional activities on these islands may include biological, archeological, and geological research (personal communication with HINWR, 2001).

Laysan Island supports a small year-round field station maintained by the Service. The staff at the field camp on Laysan control non-native plant species, propagate and outplant native plants, and periodically monitor both native and non-native plant species. Other conservation activities include sea bird and marine life surveys, and other biological, archeological, and geological research (personal communication with HINWR, 2001).

Potential Project or Activity, next 10 Years: Two conservation projects on Laysan and a conservation plan for the HINWR

Currently, the Refuge is planning on completing a conservation plan for all of the islands in the HINWR (personal communication with HINWR, 2001). The acceptance of this plan may involve an internal consultation.

In addition, a few island-specific activities may require consultation. On Laysan Island, the HINWR is currently working to achieve its long range goal to restore the Laysan Island ecosystems. To do this, Refuge staff will attempt to (1) restore native insects and (2) introduce the Nihoa millerbird to replace species that have been extirpated from Laysan Island. The Refuge manager indicates that the Refuge will likely enter into an internal consultation on each of these two projects. On Nihoa and Necker Islands, the HINWR does not anticipate conducting any section 7 consultations due to the very limited activity taking place there.

Federal Involvement: Ownership and management by the Service

Presence of Other Listed Species: Nihoa, Necker, and Laysan Islands all support populations of listed birds, turtles, and sea mammals

Consultations and Costs

- Total Section 7 Costs: \$11,400

Estimate is based on (1) three informal internal consultations over the next 10 years, (2) the cost of consultation with a Federal agency as the applicant (\$3,800), and (3) no biological surveys because the HINWR regularly conducts plant surveys as part of its conservation activities. All of the consultation costs are conservatively assigned to the plants, even though the consultation may also address listed wildlife species that may be present.

- Cost Attributable to Critical Habitat: \$0

The HINWR manager indicates that consultation on the three projects listed above would have been likely without the designation of critical habitat. Thus, none of the costs are attributable to critical habitat.

Anticipated Project Modifications and Costs: None

Since HINWR projects are generally designed to promote the conservation of threatened and endangered species, it is unlikely that proposed activities would adversely affect the plants.

Entities Potentially Impacted: Service, HINWR

4.a.(2) Monk Seal Monitoring

National Marine Fisheries Service (NMFS) staff set up a field camp on Laysan Island each year in March. The camp is set up below the vegetation line and is placed in the same general area every year. During their six month stay on the island, NMFS staff make regular counts of Hawaiian monk seals, mark seal pups with tags, and survey the perimeter of the island. In general, all projects and activities are conducted below the vegetation line (personal communication with NMFS, 2002).

NMFS staff follow strict quarantine procedures to ensure that alien pests and non-native plants are not introduced. For example, all equipment used on each island must be either brand new or previously used only on that particular island. Large gear and equipment such as tents must be frozen for at least 48 hours before being allowed on each island. All food must be placed in plastic containers instead of cardboard because seeds can be transported unnoticed in cardboard containers (Service, 1998).

Potential Project or Activity, next 10 Years: Monk seal monitoring program on Laysan Island

Federal Involvement: Ownership and management by the Service

Presence of Other Listed Species: Laysan supports populations of listed birds, turtles, and sea mammals

Consultations and Costs

- Total Section 7 Costs: \$3,800

Estimate is based on (1) one informal consultation over the next 10 years, (2) the cost of consultation with a Federal agency as the applicant (\$3,800), and (3) no biological surveys because the HINWR regularly conducts plant surveys on Laysan as part of its conservation activities. All of the consultation costs are conservatively assigned to the plants, even though the consultation may also address listed wildlife species that may be present.

- Cost Attributable to Critical Habitat: \$3,800

NMFS has not consulted with the Service on the monk seal monitoring program on Laysan regarding listed plants in the past. Thus, all of the costs are attributable to critical habitat.

Anticipated Project Modifications and Costs: None

NMFS staff already follow strict quarantine measures designed by the Service to ensure alien pests and non-native plants are not introduced to Laysan Island. In addition, nearly all of the NMFS projects and activities occur on the beach and do not impact the vegetation. Thus, additional project modifications are unlikely.

Entities Potentially Impacted: Service, NMFS

4.a.(3) Conservation and Research Activities

In addition to NMFS and the Service, several other organizations have visited Nihoa, Necker, and Laysan Islands in the past to conduct conservation and research activities. These organizations include the National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS), NOAA National Ocean Service (NOS), Hawai'i Department of Land and Natural Resources (DLNR), the University of Hawai'i, and the Bishop Museum. Most of the conservation and research activities involve the aquatic resources of the NWHI, but some future expeditions may investigate the terrestrial resources on Nihoa, Necker, and Laysan Islands.

Potential Project or Activity, next 10 Years: Terrestrial conservation and research activities

Federal Involvement: Ownership and management by the Service

Presence of Other Listed Species: Nihoa, Necker, and Laysan Islands all support populations of listed birds, turtles, and sea mammals

Consultations and Costs

- Total Section 7 Costs: \$15,600

Estimate is based on (1) three informal internal Service consultations over the next 10 years, (2) the cost of consultation with a non-Action agency applicant (\$5,200), and (3) no biological surveys because the HINWR regularly conducts plant surveys as part of its conservation activities. All of the consultation costs are conservatively assigned to the plants, even though the consultation may also address listed wildlife species that may be present.

- Cost Attributable to Critical Habitat: \$15,600

Organizations conducting conservation and research activities historically have not entered into section 7 consultations with the Service. Thus, all of the costs are attributable to critical habitat.

Anticipated Project Modifications and Costs: None

Even in the absence of critical habitat designation, to obtain a special-use permit, any individual that travels to Nihoa, Necker and Laysan Islands must follow strict quarantine measures designed by the Service to ensure alien pests and non-native plants are not introduced to the islands. In addition, conservation and research activities are generally designed to promote the conservation of threatened and endangered species. Thus, additional project modifications are unlikely.

Entities Potentially Impacted:

Federal: Service, NOAA, NGS, NOS

State: DLNR, University of Hawai'i

Non-Profit: Bishop Museum

4.b. Costs to Small Entities

Under the Regulatory Flexibility Act (RFA) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e.,

small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

SBREFA amended the RFA to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

This analysis determines whether this critical habitat designation potentially affects a "substantial number" of small entities. It also quantifies the probable number of small businesses likely to experience a "significant effect." While SBREFA does not explicitly define either "substantial number" or "significant effect,"¹ the Environmental Protection Agency and other Federal agencies have interpreted these terms to represent an impact on 20 percent or more of the small entities in any industry and an effect equal or greater than three percent or more of a business' annual revenues.²

4.b.(1) Activities and Entities Potentially Impacted

The analysis above addresses all foreseeable projects, activities, land uses and entities that could be affected by the proposed critical habitat. The list below summarizes the activities that could be impacted by critical habitat (see Table 1), and the entities associated with each activity:

— **Management of the HINWR:**

Federal: Service, HINWR

— **Monk Seal Monitoring:**

Federal: Service, NMFS

— **Conservation and Research Activities:**

Federal: Service, NOAA, NGS, NOS

State: DLNR, University of Hawai'i

Non-Profit: Bishop Museum

¹ Regulatory Flexibility Act, 5 U.S.C. 601 et. seq.

² See U.S. Environmental Protection Agency, *Revised Interim Guidance for EPA Rulewriters: Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act*, March 29, 1999.

4.b.(2) Small Entities Potentially Impacted

The RFA/SBREFA considers “small entities” to include small governments, small organizations, and small businesses (5 U.S.C. § 601). The following discussion examines each entity potentially impacted from the list above to determine whether it would be considered “small” under the RFA/SBREFA.

— Federal Agencies

For the purposes of the RFA/SBREFA, Federal agencies are not considered small governments. Thus, the Service, HINWR, NMFS, NOAA, NGS, and NOS are not considered further in this portion of the economic analysis.

— State Agencies

For the purposes of the RFA/SBREFA, State governments are not considered small governmental entities. Thus DLNR is not considered further in this portion of the economic analysis. The University of Hawai'i is a large State university system so it is also not a small entity.

— Non-Profit Organizations

The RFA/SBREFA defines “small organization” as any not-for-profit enterprise that is independently owned and operated and is not dominant in its field (5 U.S.C. § 601). The Bishop Museum is not likely to be considered a small organization because it is the largest museum in the State and thus is dominant in its field.

4.b.(3) Summary: Potential Impacts on Small Entities

None of the entities potentially impacted by the designation of critical habitat are likely to be considered a small entity under the RFA/SBREFA. Thus, the designation of critical habitat will not have a significant economic impact on a substantial number of small entities.

4.c. Section 7 Related Benefits

There is little disagreement in the published economics literature that real social welfare benefits can result from the conservation and recovery of endangered and threatened species (Bishop (1978, 1980), Brookshire and Eubanks (1983), Boyle and Bishop (1986), Hageman (1985), Samples *et al.* (1986), Stoll and Johnson (1984)). Such benefits have also been ascribed to preservation of open space and biodiversity (see examples in Pearce and Moran (1994) and Fausold and Lilieholm

(1999)) both of which are associated with species conservation. Likewise, a regional economy can benefit from the preservation of healthy populations of endangered and threatened species, and the habitat on which these species depend.

However, the designation of critical habitat for the plants are not anticipated to have any significant benefits because: (1) as mentioned above, none of the section 7 consultations anticipated will result in project modifications; and (2) inclusion in the HINWR already denotes the proposed critical habitat as an area important for conservation of endangered species. Thus, the designation of critical habitat is expected to have little or no economic benefit over the next 10 years.

5. SUMMARY OF ECONOMIC IMPACTS

For various economic activities in the proposed critical habitat, Table 1 presents estimates of (1) the total costs and benefits attributable to the section 7 provisions of the Act that are associated with listing the plants as threatened and endangered species *and* with designating critical habitat for the plants; and (2) that portion of the total costs and benefits which is solely attributable to the critical habitat designation.

Over a 10-year period, total section 7-related costs associated with the plants species listings are estimated at \$30,800, while those attributable solely to the critical habitat designation are \$19,400. The economic benefits associated with critical habitat designation are expected to be extremely minor.

Table 1. Section 7 Costs and Benefits Attributable to the Plant Listings and Critical Habitat (CH)

(10-year estimates)

Item	Total	Share to CH	Explanation
DIRECT SECTION 7 COSTS			
Hawaiian Island National Wildlife Refuge (HINWR)			
Conservation projects	\$ 11,400	\$ -	Internal consultation due to HINWR involvement.
National Marine Fisheries Service (NMFS)			
Monk seal monitoring program	\$ 3,800	\$ 3,800	Consultation due to NMFS involvement.
Various Organizations			
Conservation and research activities	\$ 15,600	\$ 15,600	If organizations conduct conservation and research activities, a consultation may be required due to HINWR involvement.
DIRECT SECTION 7 BENEFITS	Negligible	Negligible	Significant benefits are not anticipated because project modifications are not likely and the HINWR is already protected.
TOTAL			
Costs Over 10 Years	\$ 30,800	\$ 19,400	Costs of consultations.
Benefits Over 10 Years	Negligible	Negligible	Significant economic benefits not anticipated

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Information was provided in communications with representatives of:

- Bishop Museum
- Hawaiian Islands National Wildlife Refuge
- U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Nation Marine Fisheries Service
- U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office